

3) combining said treated alumina with triethylaluminum and bis(n-butylcyclopentadienyl) zirconium dichloride.

45. A process according to Claim 8 wherein said catalyst composition is produced by a process consisting essentially of contacting said organometal compound, said treated solid oxide compound, and said organoaluminum compound.

46. A polymer produced by the process of Claim 8.

47. A polymer produced by the process of Claim 39.

48. A polymer produced by the process of Claim 40.

49. A polymer produced by the process of Claim 44.

REMARKS

For the convenience of the Examiner, Applicants provide the following information to show that each new claim is fully supported by the disclosure.

Claim 26: p.16, lines 8-10.

Claim 27: p.16, lines 10-11.

Claim 28: p.16, lines 11-12.

Claim 29: p.16, lines 4-5.

Claim 30: p.15, lines 19-20; p.16, lines 1-7.

Claim 31: p.10, lines 19-20; p.11, lines 1-4.

Claim 32: p.11, lines 4-6.

Claim 33: p.11, lines 8-12.

Claim 34: p.12, lines 9-14.

Claim 35: p.11, lines 13-15.

Claim 36: p.11, lines 15-20.

Claim 37: p.13, lines 8-13.

Claim 38: p.14, lines 17-20; p.15, line 1; p.8, lines 4-18; p.9, lines 11-19; p.12, lines 3-7; and p.11, lines 8-11.

Claim 39: p.13, lines 8-19; and Example 36.

Claim 40: p.12, lines 9-14, p.11, line 11; p.13, lines 1-3; p.9, line 13 and line 16.

Claim 41: p.8, line 12.

Claim 42: p.11, line 11.

Claim 43: Example 36.

Claim 44: Example 36.

Claim 45: p.3, line 16.

CONCLUDING REMARKS

Applicants respectfully request that the Examiner enter this Preliminary Amendment into the record.

Respectfully submitted,

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(Date)

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APPENDIX

Please make the following changes:

IN THE TITLE

Please amend the title of the invention as follows:

[COMPOSITIONS THAT CAN PRODUCE] PROCESS FOR
PRODUCING POLYMERS

IN THE SPECIFICATION

Please delete the Abstract and substitute the following therefor:

[This invention provides a compositions that are useful for polymerizing] A process of using a catalyst composition to polymerize at least one monomer [into at least one] to produce a polymer. The process comprises contacting the catalyst composition and at least one monomer in a polymerization zone under polymerization conditions to produce the polymer. The catalyst composition is produced by a process comprising contacting at least one organometal compound, at least one treated solid oxide compound, and at least one organoaluminum compound.

IN THE CLAIMS

Please delete Claims 1-7, and 9-25.

Please amend Claim 8 as follows:

8. (amended) A process of using [the] a catalyst composition [of claim 7] to polymerize at least one monomer[s] [into polymers] to produce a polymer, said

process comprising contacting said catalyst composition and at least one monomer in a polymerization zone under polymerization conditions to produce said polymer;[.]

wherein said catalyst composition is produced by a process comprising contacting at least one organometal compound, at least one treated solid oxide compound, and at least one organoaluminum compound to produce said catalyst composition,

wherein said organometal compound has the following general formula



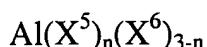
wherein M¹ is selected from the group consisting of titanium, zirconium, and hafnium, and

wherein (X¹) is independently selected from the group consisting of cyclopentadienyls, indenyls, fluorenyls, substituted cyclopentadienyls, substituted indenyls, and substituted fluorenyls, and

wherein substituents on said substituted cyclopentadienyls, substituted indenyls, and substituted fluorenyls are selected from the group consisting of aliphatic groups, cyclic groups, combinations of aliphatic and cyclic groups, and organometallic groups, and hydrogen; and

wherein (X³) and (X⁴) are independently selected from the group consisting of halides, aliphatic groups, cyclic groups, combinations of aliphatic and cyclic groups, and organometallic groups, and wherein (X²) is selected from the group consisting of Group OMC-I or Group OMC-II, and

wherein said organoaluminum compound has the following general formula,



wherein (X⁵) is a hydrocarbyl having from 1-20 carbon atoms, and wherein (X⁶) is a halide, hydride, or alkoxide, and wherein "n" is a number from 1 to 3 inclusive;

wherein said treated solid oxide compound is produced by a process comprising contacting at least one solid oxide compound with at least one electron-withdrawing anion source compound; and

wherein said solid oxide compound is calcined before, during, or after contacting said electron-withdrawing anion source; and

wherein the activity of said catalyst composition is greater than 250 grams of polyethylene per gram of treated solid oxide compound per hour; and wherein there is a substantial absence of aluminoxanes and organoborates.